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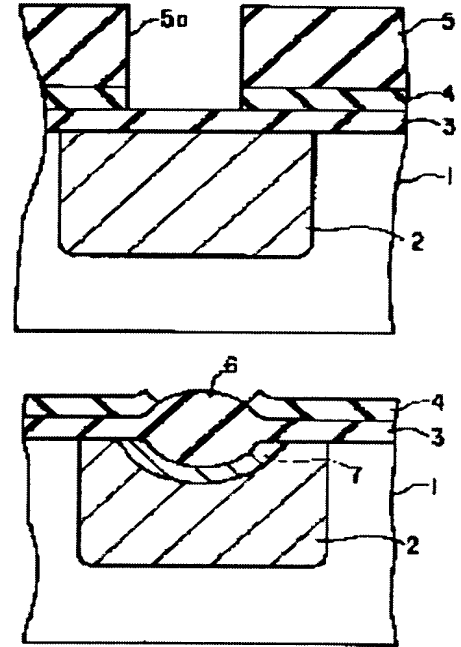
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(54) FABRICATION OF SEMICONDUCTOR DEVICE

(57)Abstract:

PURPOSE: To ensure a sufficient isolation breakdown strength regardless of oxidation acceleration diffusion by depositing an isolation oxide on the surface of impurity region by local oxidation and annealing a semiconductor substrate in an oxygen free atmosphere under specified conditions.

CONSTITUTION: An impurity region 2 is formed on a P type silicon substrate 1 deposited with SiO₂ 3 and an anti-oxidation film, i.e., Si₃N₄ 4, is deposited thereon. A photoresist film 5 having an opening 5a above the impurity region 2 is then deposited on the Si₃N₄ 4 and used, as a mask, for removing the Si₃N₄ 4 located beneath the opening 5a. Subsequently, the photoresist 5 is removed and an isolation oxide 6 is deposited on the surface of the impurity region 2 using the Si₃N₄ 4 as a mask. Finally, the Si₃N₄ 4 is removed and the P type silicon substrate 1 is annealed at 1000° C or above for at least 1min.



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